

DETAILED ACTION

1. In response to Applicant Initiated interview on 25 April 2008 with acknowledgement of an Applicant Initiated Interview on 18 April 2008 and an original application filed on 25 August 2003, having the benefit of provisional application 60/406,854 filed 29 August 2002, and provision applications 60/459,182, 60/459,152 filed 31 March 2003.
2. Claims 1-45 are pending; claims 1, 22, 30, 37, and 42, are independent claims. Claims 1, 22, 30, and 42 have been amended. Amendment to the claims are accepted.
3. An examiner's amendment to the record is attached. Please enter entire claim set. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee. The examiner's amendment was authorized by attorney of record Sanders N. Hillis in phone interview on 25 April 2008 and confirming email sent on 25 April 2008.

Response to Arguments

4. Applicant's arguments discussed on 18 April 2008 concerning the allowable subject matter that the IED comprises "different categories of power system monitoring or control, and the first security access and the second security access are each configured to provide a user access to at least on mutually exclusive function" have been fully considered and they are persuasive.

Allowable Subject Matter

5. Claims 1-45 are allowed.

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Conclusion

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen C Tran whose telephone number is (571) 272-3842. The examiner can normally be reached from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/ELLEN TRAN/

Primary Examiner, Art Unit 2134

25 April 2008

Examiner's Amendment

This listing of the claims will replace all prior versions and listings of the claims in the application:

Listing of Claims:

1. (Currently Amended) An intelligent electronic device for monitoring electrical parameters in an electrical circuit, the intelligent electronic device comprising:
 - a sensor configured to be coupled with the electrical circuit and sense at least one of current and voltage in the electrical circuit, the sensor also configured to generate a signal indicative of the at least one of current and voltage;
 - a processor coupled with the sensor, wherein the processor is configured to generate a measurement signal indicative of the at least one of current and voltage in response to the signal;
 - the processor configured to concurrently provide a first intelligent electronic device functionality comprising a first security access and a second intelligent electronic device functionality comprising a second security access;
 - wherein the first functionality and the second functionality comprise different categories of power system monitoring or control, and the first security access and the second security access are each configured to provide user access to at least one mutually exclusive function.
2. (Original) The intelligent electronic device of claim 1, wherein the first intelligent electronic device functionality and the second intelligent electronic device functionality each exclusively comprise at least one of a circuit breaker control functionality, a power quality functionality, a billing power monitoring functionality, a protective relay functionality, and a sequence of events recording functionality.
3. (Original) The intelligent electronic device of claim 1, wherein the first security access is enabled with a first user identification and the second security access is enabled with a second user identification.

4. (Original) The intelligent electronic device of claim 3, wherein at least one of the first user identification and the second user identification includes a permissive signal, the permissive signal indicative of when a predetermined condition is met.
5. (Original) The intelligent electronic device of claim 4, wherein the predetermined condition comprises enablement of a safety lockout mechanism.
6. (Original) The intelligent electronic device of claim 4, wherein the predetermined condition comprises the status of a digital input to the intelligent electronic device.
7. (Original) The intelligent electronic device of claim 4, wherein the predetermined condition comprises a determined time period.
8. (Original) The intelligent electronic device of claim 1, further comprising an interface coupled with the processor, wherein the processor is configured to provide an energy parameter to the interface as a function of the measurement signal.
9. (Original) The intelligent electronic device of claim 8, wherein the interface is configured to receive a first user identification to enable the first security access and a second user identification to enable the second security access.
10. (Original) The intelligent electronic device of claim 8, wherein the first intelligent electronic device functionality and the second intelligent electronic device functionality are configured to share the interface.
11. (Original) The intelligent electronic device of claim 8, wherein the interface comprises a biometric identification device coupled with the processor, wherein the biometric identification device is configured to identify a user as part of at least one of the first security access and the second security access.

12. (Original) The intelligent electronic device of claim 11, wherein the biometric identification device comprises a fingerprint scanner.
13. (Original) The intelligent electronic device of claim 11, wherein the biometric identification device comprises a face recognition unit.
14. (Original) The intelligent electronic device of claim 11, wherein the biometric identification device comprises a retinal scanner.
15. (Original) The intelligent electronic device of claim 1, wherein the processor comprises a first processor and a second processor, the first processor configured to provide the first intelligent electronic device functionality and the second processor configured to concurrently provide the second intelligent electronic device functionality.
16. (Original) The intelligent electronic device of claim 15, wherein the second processor is configured to function independent of the first processor.
17. (Original) The intelligent electronic device of claim 16, wherein the first intelligent electronic device functionality includes a billing power monitoring functionality and the second intelligent electronic device functionality includes a protective relay functionality.
18. (Original) The intelligent electronic device of claim 1, wherein the first intelligent electronic device functionality includes a protective relay functionality.
19. (Original) The intelligent electronic device of claim 1, wherein the first intelligent electronic device functionality includes a circuit breaker control functionality.

20. (Original) The intelligent electronic device of claim 1, wherein the first intelligent electronic device functionality includes a billing power monitoring functionality and the second intelligent electronic device functionality includes a protective relay functionality.
21. (Original) The intelligent electronic device of claim 1, wherein the first intelligent electronic device functionality includes a power quality functionality and the second intelligent electronic device functionality includes a protective relay functionality.
22. (Currently Amended) A method of secure access to an intelligent electronic device, the method comprising:
- providing an intelligent electronic device that includes a sensor interface configured to operably couple to a power system sensor, the intelligent electronic device configured to monitor an electrical parameter of an electrical circuit in a power system;
 - the intelligent electronic device prompting for entry of a user identification to access the functionalities of the intelligent electronic device;
 - allowing access to a first intelligent electronic device functionality provided by the intelligent electronic device only as a function of entry of a first user identification; and
 - allowing access to a second intelligent electronic device functionality provided by the intelligent electronic device only as a function of entry of a second user identification, wherein the first intelligent electronic device functionality and the second intelligent electronic device functionality both include independent functions that comprise different categories of power system monitoring or control.
23. (Original) The method of claim 22, wherein the intelligent electronic device is operating the first and second intelligent electronic device functionalities in parallel.
24. (Original) The method of claim 22, further comprising performing a plurality of intelligent electronic device functionalities concurrently within the intelligent electronic device, wherein the intelligent electronic device functionalities include at least two of a circuit breaker control

functionality, a power quality functionality, a billing power monitoring functionality, a protective relay functionality and a sequence of events recording functionality.

25. (Original) The method of claim 22, wherein allowing access comprises receiving as one of the first user identification and the second user identification a security code and a permissive signal, wherein the permissive signal indicates that a predetermined condition has been met.
26. (Original) The method of claim 22, wherein allowing access comprises receiving as one of the first and second user identification a security code from a biometric identification device.
27. (Original) The method of claim 22, wherein allowing access comprises comparing the first user identification and the second user identification to a plurality of stored user identifications and enabling secure access to the respective first and second intelligent electronic device functionalities as a function of a match.
28. (Previously Presented) The method of claim 22, wherein the intelligent electronic device prompting for entry of the user identification is in response to a request to access one of the first and second intelligent electronic device functionalities.
29. (Previously Presented) The method of claim 22, wherein the intelligent electronic device prompting for entry of the user identification comprises communication of a plurality of stored user identifications over a communication medium to the processor, the processor configured to compare the stored user identifications to the first and second user identification.
30. (Currently Amended) An intelligent electronic device configured to monitor electrical parameters in an electrical circuit, the intelligent electronic device comprising:
a processor operable in the intelligent electronic device to send and receive electrical signals that include electrical signals indicative of electrical parameters in the electrical circuit;

a sensor interface coupled to the processor and positioned proximate to the processor, the sensor interface configured to operably couple with a sensor coupled with the electrical circuit, and the processor configured to at least one of monitor, meter, measure, and control the electrical circuit;

a memory device coupled with the processor, wherein the memory device is configured to store parameters related to the electrical signals indicative of electrical parameters in the electrical circuit;

wherein the processor is configurable to allow access to a first data parameter stored in the memory device as a function of a first security signal, wherein the first data parameter is included in a first intelligent electronic device functionality; ~~and~~

wherein the processor is configurable to allow access to a second data parameter stored in the memory device as a function of a second security signal, wherein the second data parameter is included in a second intelligent electronic device functionality; and

wherein the first intelligent electronic device functionality and the second intelligent electronic device functionality both include independent functions that comprise different categories of power system monitoring or control.

31. (Original) The intelligent electronic device of claim 30, wherein the first and second security signals comprises a respective first and second user identification.
32. (Original) The intelligent electronic device of claim 30, wherein the processor is configured to operate the first and second intelligent electronic device functionalities concurrently.
33. (Original) The intelligent electronic device of claim 30, wherein one of the first and second security signals comprises a security code and a permissive signal.
34. (Original) The intelligent electronic device of claim 30, further comprising a biometric identification device, wherein at least part of the security code is generated by the biometric identification device.

35. (Original) The intelligent electronic device of claim 30, wherein at least one of the first and second security signals are transmitted over a communication medium.
36. (Original) The intelligent electronic device of claim 30, further comprising a communication link coupled with the processor, wherein the processor is configured to request a plurality of stored security signals be communicated over the communication link to compare with the first and second security signals.
37. (Original) An intelligent electronic device configured to monitor electrical parameters in an electrical circuit, the intelligent electronic device comprising:
- a memory device configured to store instructions;
 - instructions in the memory device to process and store data indicative of electrical parameters sensed on the electrical circuit;
 - instructions in the memory device to concurrently perform billing power monitoring functionality and protective relay functionality as a function of the sensed electrical parameters;
 - instructions in the memory device to configure the intelligent electronic device to allow access to the billing power monitoring functionality only when a first user identification is provided; and
 - instructions in the memory device to configure the intelligent electronic device to allow access to the protective relaying functionality only when a second user identification is provided.
38. (Original) The intelligent electronic device of claim 37, further comprising instructions in the memory device to enable access to one of the billing power monitoring functionality and the protective relay functionality with the same interface.
39. (Original) The intelligent electronic device of claim 37, further comprising instructions in the memory device to concurrently perform at least one of a circuit breaker control functionality, a power quality functionality and a sequence of events recording functionality.

40. (Original) The intelligent electronic device of claim 37, wherein the processor comprises a microprocessor and a digital signal processor in cooperative operation.
41. (Original) The intelligent electronic device of claim 37, further comprising instructions in the memory device to verify a determined condition has been met prior to providing access, wherein the determined condition comprises at least one of enablement of a safety lockout mechanism, transition of a digital input and a determined time period.
42. (Currently Amended) A method of securing access to an intelligent electronic device via a graphical user interface that includes a display and a selection device, the method comprising:
- retrieving from a memory of the intelligent electric device a security access entry for presentation on the display of the intelligent electronic device, the intelligent electronic device configured to operably couple to an electrical circuit;
 - displaying the security access entry on the display of the intelligent electronic device;
 - receiving one of a plurality of security signals entered as a function of the selection device into the security access entry;
 - in response to a first security signal, allowing access to a first intelligent electronic device functionality available within the intelligent electronic device; and
 - in response to a second security signal, allowing access to a second intelligent electronic device functionality available within the intelligent electronic device, wherein each of the first and second electronic device functionalities are representative of different categories of power system monitoring or control and each includes a mutually exclusive function.
43. (Previously Presented) The method of claim 42 further comprising:
- receiving from a remote location a security access query; and
 - the intelligent electronic device providing information to generate a remote display of the security access entry at the remote location.

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44. (Previously Presented) The intelligent electronic device of claim 1 further comprising:
a sensor interface coupled to the sensor, wherein the sensor interface is configured to couple to an external electrical sensor that is directly coupled to the electrical circuit.
45. (Previously Presented) The method of claim 22, wherein the power system sensor is internal to the intelligent electronic device.

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25 April 2008